

invention, will be apparent to those skilled in the art on reference to this description. It is therefore contemplated that the appended claims will cover any such modifications or embodiments as fall within the true
5 scope of the invention.

What is claimed is:

1. A method of manufacturing a semiconductor laser chip comprising:

10 providing a semiconductor substrate including an active layer and a block layer;

forming an electrode line pattern and a marker on the semiconductor substrate;

15 etching the semiconductor substrate to form a W channel;

forming an oxide layer on the semiconductor substrate to cover the electrode line pattern and the marker;

20 removing a part of the oxide layer to form an electrode contact that exposes the electrode line pattern;

forming a mounting electrode on the electrode line pattern; and

25 dividing the semiconductor substrate into a plurality of semiconductor laser chip.

2. A method of manufacturing a semiconductor laser chip according to claim 1, wherein the electrode

line pattern is formed at a junction side of the semiconductor substrate.

3. A method of manufacturing a semiconductor laser chip according to claim 1, wherein the semiconductor
5 substrate is an InP substrate.

4. A method of manufacturing a semiconductor laser chip according to claim 1, further comprising performing a sintering so as to ensure an ohmic contact between the electrode line pattern and the semiconductor substrate.

10 5. A method of manufacturing a semiconductor laser chip according to claim 1, wherein the electrode line pattern and the marker are formed of AuZu.

6. A method of manufacturing a semiconductor laser chip according to claim 1, further comprising etching the
15 oxide layer at a portion that is a peripheral region of the semiconductor laser chip.

7. A method of manufacturing a semiconductor laser chip according to claim 1, further comprising coating an end surface of the semiconductor laser chip.

20 8. A method of manufacturing a semiconductor laser chip comprising:

providing a semiconductor substrate including an active layer and a block layer;

forming an electrode line pattern on the
25 semiconductor substrate;

etching the semiconductor substrate to form a W channel;

forming an oxide layer on the semiconductor substrate;

removing a part of the oxide layer to form an electrode contact that exposes the electrode line pattern and a marker that exposes the semiconductor substrate;

forming a mounting electrode on the electrode line pattern; and

dividing the semiconductor substrate into a plurality of semiconductor laser chip.

10 9. A method of manufacturing a semiconductor laser chip according to claim 8, wherein the electrode line pattern is formed at a junction side of the semiconductor substrate.

15 10. A method of manufacturing a semiconductor laser chip according to claim 8, wherein the semiconductor substrate is an InP substrate.

20 11. A method of manufacturing a semiconductor laser chip according to claim 8, further comprising performing a sintering so as to ensure an ohmic contact between the electrode line pattern and the semiconductor substrate.

12. A method of manufacturing a semiconductor laser chip according to claim 8, wherein the electrode line pattern is formed of AuZu.

25 13. A method of manufacturing a semiconductor laser chip according to claim 8, further comprising etching the oxide layer at a portion that is a peripheral

region of the semiconductor laser chip.

14. A method of manufacturing a semiconductor laser chip according to claim 8, further comprising coating an end surface of the semiconductor laser chip.

5 15. A method of manufacturing a semiconductor laser chip having a marker for detecting a position of the chip, the method comprising:

providing a semiconductor substrate including an active layer and a block layer;

10 forming an electrode line pattern and a marker on the semiconductor substrate;

forming an oxide layer on the semiconductor substrate so as to cover the electrode line pattern and the marker;

15 removing a part of the oxide layer to form an electrode contact that exposes the electrode line pattern;

forming a mounting electrode on the electrode line pattern; and

20 dividing the semiconductor substrate into a plurality of semiconductor laser chip. .

16. A method of manufacturing a semiconductor laser chip according to claim 15, wherein the semiconductor substrate is an InP substrate.

25 17. A method of manufacturing a semiconductor laser chip according to claim 15, further comprising performing a sintering so as to ensure an ohmic contact

between the electrode line pattern and the semiconductor substrate.

18. A method of manufacturing a semiconductor laser chip according to claim 15, wherein the electrode
5 line pattern and the marker are formed of AuZu.

19. A method of manufacturing a semiconductor laser chip according to claim 15, wherein the semiconductor laser chip includes a plurality of markers.

20. A method of manufacturing a semiconductor
10 laser chip according to claim 15, wherein the marker has a substantial round shape.